

Amendments to the Claims

This listing of claims will replace all prior versions, or listings, or claims in the application.

Listing of Claims:

1. (original) A fiber-reinforced metal-ceramic composite material having a hot ceramic side and a cool metal side and a graded ceramic-metal zone therebetween, wherein the ceramic content of said composite ranges from 100% at said hot ceramic side to 0% at said cool metal side and the metal content of said composite ranges from 0% at said hot ceramic side to 100% at said cool metal side, and wherein said fiber reinforcement is graded by coefficient of thermal expansion from said hot ceramic side to said cool metal side.
2. (original) The fiber-reinforced metal-ceramic composite material of claim 1 wherein the fiber in the hot region has a lower coefficient of thermal expansion than the fiber in the cool region.
3. (original) The fiber-reinforced metal-ceramic composite material of claim 1 wherein the fiber in the hot region has a higher coefficient of thermal expansion than the fiber in the cool region.
4. (new) A fiber-reinforced metal-ceramic composite material having a hot ceramic side and a cool metal side and a graded ceramic-metal zone therebetween, wherein the ceramic content of said composite ranges from 100% at said hot ceramic side to 0% at said cool metal side and the metal content of said composite ranges from 0% at said hot ceramic side to 100% at said cool metal side, and wherein said fiber reinforcement is graded by coefficient of thermal expansion from said hot ceramic side to said cool metal side to withstand a temperature differential of at or greater than 100°C wherein said metal content comprises material selected for thermal conductivity.

5. (new) The fiber-reinforced metal-ceramic composite material of claim 4 wherein the fiber in the hot region has a lower coefficient of thermal expansion than the fiber in the cool region.

6. (new) The fiber-reinforced metal-ceramic composite material of claim 4 wherein the fiber in the hot region has a higher coefficient of thermal expansion than the fiber in the cool region.

7. (new) A fiber-reinforced metal-ceramic composite material having a hot ceramic side and a cool metal side and a graded ceramic-metal zone therebetween, wherein the ceramic content of said composite ranges from 100% at said hot ceramic side to 0% at said cool metal side and the metal content of said composite ranges from 0% at said hot ceramic side to 100% at said cool metal side, and wherein said fiber reinforcement is graded by coefficient of thermal expansion from said hot ceramic side to said cool metal side to withstand a temperature differential of at or greater than 100°C wherein said metal content comprises material selected for load bearing capacity.

8. (new) The fiber-reinforced metal-ceramic composite material of claim 7 wherein the fiber in the hot region has a lower coefficient of thermal expansion than the fiber in the cool region.

9. (new) The fiber-reinforced metal-ceramic composite material of claim 7 wherein the fiber in the hot region has a higher coefficient of thermal expansion than the fiber in the cool region.